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AGRICULTURAL MEMORANDUM No. 379

Gramineae Pollen in London

L P Smith

1. Start of Season

Ag Mem 377 used Kew temperature data to forecast total seasonal counts of pollen.

If the mean air temperatures of four stations surrounding London, Rothamsted (NW), Writtle (NE), East Malling (SE) and Wisley (SW) for April and May are used as the weather parameter a similar result is obtained. The formula becomes

$$\text{Seasonal Total} = 6.7T_4 + 8M - 100 \text{ in units of } 100.$$

The start of a pollen 'season' is difficult to define, but specifing it as the first day in June when the mean count is at least 50, a link can be seen with the mean April and May air temperatures, and a theoretical 'start' can be deduced.

Year	Total Pollen (100s) Actual	Total Pollen (100s) Estimated	T_4	First day in June with count of 50	Theoretical 'start'
1964	85	79	22.4	5th	4th
1961	64	60	21.4	4th	4th
1966	50	49	19.3	7th	7th
1965	42	50	20.1	11th	5th
1962	41	28	18.4	10th	9th
1969	40	51	19.6	8th	6th
1967	35	32	18.7	12th	8th
1963	31	33	19.4	10th	7th
1970	29	36	19.9	8th	6th
1968	27	28	18.3	9th	9th

From which a 'rule' could be deduced.

When T_4	Starting date
exceeds 21.0°C	June 4
20-20.9	June 5
19.5-19.9	June 6
19.0-19.4	June 7
18.5-18.9	June 8
18.0-18.4	June 9
17.5-17.9	June 10
less than 17.5	June 11

Any comments or suggestions on this paper should be referred to the author.

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